



Sequence Listing

<110> HENRY CHIU

HILARY CLARK

KATHRYN DENNIS

SHERMAN FONG

JILL SCHOENFELD

WILLIAM WOOD

THOMAS WU

<120> COMPOSITIONS AND METHODS FOR THE TREATMENT OF IMMUNE
RELATED DISEASES

<130> P1973R1-US

<140> US 10/614,853

<141> 2003-07-08

<150> US 60/394,485

<151> 2002-07-08

<160> 28

<210> 1

<211> 1816

<212> DNA

<213> Homo sapien

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<211> 426

<212> PRT

<213> Homo sapien

<400> 2

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Ser Pro Glu Trp Met	Leu Gln His Asp	Leu Ile Pro Gly Asp	Leu		
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Arg Asp Leu Arg Val	Glu Pro Val Thr	Thr Ser Val Ala Thr	Gly		
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Asp Tyr Ser Ile Leu	Met Asn Val Ser	Trp Val Leu Arg Ala	Asp		
	65		70		75
Ala Ser Ile Arg Leu	Leu Lys Ala Thr	Lys Ile Cys Val Thr	Gly		
	80		85		90
Lys Ser Asn Phe Gln	Ser Tyr Ser Cys	Val Arg Cys Asn Tyr	Thr		
	95		100		105
Glu Ala Phe Gln Thr	Gln Thr Arg Pro	Ser Gly Gly Lys Trp	Thr		
	110		115		120
Phe Ser Tyr Ile Gly	Phe Pro Val Glu	Leu Asn Thr Val Tyr	Phe		
	125		130		135
Ile Gly Ala His Asn	Ile Pro Asn Ala	Asn Met Asn Glu Asp	Gly		
	140		145		150
Pro Ser Met Ser Val	Asn Phe Thr Ser	Pro Gly Cys Leu Asp	His		
	155		160		165
Ile Met Lys Tyr Lys	Lys Lys Cys Val	Lys Ala Gly Ser Leu	Trp		
	170		175		180
Asp Pro Asn Ile Thr	Ala Cys Lys Lys	Asn Glu Glu Thr Val	Glu		
	185		190		195
Val Asn Phe Thr Thr	Thr Pro Leu Gly	Asn Arg Tyr Met Ala	Leu		
	200		205		210
Ile Gln His Ser Thr	Ile Ile Gly Phe	Ser Gln Val Phe Glu	Pro		
	215		220		225
His Gln Lys Lys Gln	Thr Arg Ala Ser	Val Val Ile Pro Val	Thr		
	230		235		240
Gly Asp Ser Glu Gly	Ala Thr Val Gln	Leu Thr Pro Tyr Phe	Pro		
	245		250		255
Thr Cys Gly Ser Asp	Cys Ile Arg His	Lys Gly Thr Val Val	Leu		
	260		265		270
Cys Pro Gln Thr Gly	Val Pro Phe Pro	Leu Asp Asn Asn Lys	Ser		
	275		280		285
Lys Pro Gly Gly Trp	Leu Pro Leu Leu	Leu Leu Ser Leu Leu	Val		
	290		295		300
Ala Thr Trp Val Leu	Val Ala Gly Ile	Tyr Leu Met Trp Arg	His		
	305		310		315

Glu	Arg	Ile	Lys	Lys	Thr	Ser	Phe	Ser	Thr	Thr	Thr	Leu	Leu	Pro	320	325	330
Pro	Ile	Lys	Val	Leu	Val	Val	Tyr	Pro	Ser	Glu	Ile	Cys	Phe	His	335	340	345
His	Thr	Ile	Cys	Tyr	Phe	Thr	Glu	Phe	Leu	Gln	Asn	His	Cys	Arg	350	355	360
Ser	Glu	Val	Ile	Leu	Glu	Lys	Trp	Gln	Lys	Lys	Lys	Ile	Ala	Glu	365	370	375
Met	Gly	Pro	Val	Gln	Trp	Leu	Ala	Thr	Gln	Lys	Lys	Ala	Ala	Asp	380	385	390
Lys	Val	Val	Phe	Leu	Leu	Ser	Asn	Asp	Val	Asn	Ser	Val	Cys	Asp	395	400	405
Gly	Thr	Cys	Gly	Lys	Ser	Glu	Gly	Ser	Pro	Ser	Glu	Asn	Ser	Gln	410	415	420
Asp	Ser	Ser	Pro	Cys	Leu										425		

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 <212> DNA
 <213> Homo sapien

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<210> 4

<211> 567

<212> PRT

<213> Homo sapien

<400> 4

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				20					25					30
Asp	Pro	Phe	Glu	Lys	Cys	Met	Gln	Asp	Pro	Asp	Tyr	Glu	Gln	Leu
				35					40					45

Leu	Lys	Val	Val	Thr	Trp	Gly	Leu	Asn	Arg	Thr	Leu	Lys	Pro	Gln	
				50					55					60	
Arg	Val	Ile	Val	Val	Gly	Ala	Gly	Val	Ala	Gly	Leu	Val	Ala	Ala	
				65					70					75	
Lys	Val	Leu	Ser	Asp	Ala	Gly	His	Lys	Val	Thr	Ile	Leu	Glu	Ala	
				80					85					90	
Asp	Asn	Arg	Ile	Gly	Gly	Arg	Ile	Phe	Thr	Tyr	Arg	Asp	Gln	Asn	
				95					100					105	
Thr	Gly	Trp	Ile	Gly	Glu	Leu	Gly	Ala	Met	Arg	Met	Pro	Ser	Ser	
				110					115					120	
His	Arg	Ile	Leu	His	Lys	Leu	Cys	Gln	Gly	Leu	Gly	Leu	Asn	Leu	
				125					130					135	
Thr	Lys	Phe	Thr	Gln	Tyr	Asp	Lys	Asn	Thr	Trp	Thr	Glu	Val	His	
				140					145					150	
Glu	Val	Lys	Leu	Arg	Asn	Tyr	Val	Val	Glu	Lys	Val	Pro	Glu	Lys	
				155					160					165	
Leu	Gly	Tyr	Ala	Leu	Arg	Pro	Gln	Glu	Lys	Gly	His	Ser	Pro	Glu	
				170					175					180	
Asp	Ile	Tyr	Gln	Met	Ala	Leu	Asn	Gln	Ala	Leu	Lys	Asp	Leu	Lys	
				185					190					195	
Ala	Leu	Gly	Cys	Arg	Lys	Ala	Met	Lys	Lys	Phe	Glu	Arg	His	Thr	
				200					205					210	
Leu	Leu	Glu	Tyr	Leu	Leu	Gly	Glu	Gly	Asn	Leu	Ser	Arg	Pro	Ala	
				215					220					225	
Val	Gln	Leu	Leu	Gly	Asp	Val	Met	Ser	Glu	Asp	Gly	Phe	Phe	Tyr	
				230					235					240	
Leu	Ser	Phe	Ala	Glu	Ala	Leu	Arg	Ala	His	Ser	Cys	Leu	Ser	Asp	
				245					250					255	
Arg	Leu	Gln	Tyr	Ser	Arg	Ile	Val	Gly	Gly	Trp	Asp	Leu	Leu	Pro	
				260					265					270	
Arg	Ala	Leu	Leu	Ser	Ser	Leu	Ser	Gly	Leu	Val	Leu	Leu	Asn	Ala	
				275					280					285	
Pro	Val	Val	Ala	Met	Thr	Gln	Gly	Pro	His	Asp	Val	His	Val	Gln	
				290					295					300	
Ile	Glu	Thr	Ser	Pro	Pro	Ala	Arg	Asn	Leu	Lys	Val	Leu	Lys	Ala	
				305					310					315	
Asp	Val	Val	Leu	Leu	Thr	Ala	Ser	Gly	Pro	Ala	Val	Lys	Arg	Ile	
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Thr	Phe	Ser	Pro	Pro	Leu	Pro	Arg	His	Met	Gln	Glu	Ala	Leu	Arg	

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Arg	Pro	Phe	Trp	Arg	Glu	Glu	His	Ile	Glu	Gly	Gly	His	Ser	Asn
				365					370					375
Thr	Asp	Arg	Pro	Ser	Arg	Met	Ile	Phe	Tyr	Pro	Pro	Pro	Arg	Glu
				380					385					390
Gly	Ala	Leu	Leu	Leu	Ala	Ser	Tyr	Thr	Trp	Ser	Asp	Ala	Ala	Ala
				395					400					405
Ala	Phe	Ala	Gly	Leu	Ser	Arg	Glu	Glu	Ala	Leu	Arg	Leu	Ala	Leu
				410					415					420
Asp	Asp	Val	Ala	Ala	Leu	His	Gly	Pro	Val	Val	Arg	Gln	Leu	Trp
				425					430					435
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Gln	Gly	Gly	Phe	Val	Val	Gln	Pro	Pro	Ala	Leu	Trp	Gln	Thr	Glu
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Lys	Asp	Asp	Trp	Thr	Val	Pro	Tyr	Gly	Arg	Ile	Tyr	Phe	Ala	Gly
				470					475					480
Glu	His	Thr	Ala	Tyr	Pro	His	Gly	Trp	Val	Glu	Thr	Ala	Val	Lys
				485					490					495
Ser	Ala	Leu	Arg	Ala	Ala	Ile	Lys	Ile	Asn	Ser	Arg	Lys	Gly	Pro
				500					505					510
Ala	Ser	Asp	Thr	Ala	Ser	Pro	Glu	Gly	His	Ala	Ser	Asp	Met	Glu
				515					520					525
Gly	Gln	Gly	His	Val	His	Gly	Val	Ala	Ser	Ser	Pro	Ser	His	Asp
				530					535					540
Leu	Ala	Lys	Glu	Glu	Gly	Ser	His	Pro	Pro	Val	Gln	Gly	Gln	Leu
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Ser	Leu	Gln	Asn	Thr	Thr	His	Thr	Arg	Thr	Ser	His			
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<211> 3314

<212> DNA

<213> Homo sapien

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 <212> PRT
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 35 40 45
 Gln Ala Asp Thr Val Arg Gly Ala Val Leu Gly Ser Arg Ser Ala
 50 55 60
 Trp Ala Val Glu Phe Phe Ala Ser Trp Cys Gly His Cys Ile Ala
 65 70 75
 Phe Ala Pro Thr Trp Lys Ala Leu Ala Glu Asp Val Lys Ala Trp
 80 85 90
 Arg Pro Ala Leu Tyr Leu Ala Ala Leu Asp Cys Ala Glu Glu Thr
 95 100 105
 Asn Ser Ala Val Cys Arg Asp Phe Asn Ile Pro Gly Phe Pro Thr
 110 115 120
 Val Arg Phe Phe Lys Ala Phe Thr Lys Asn Gly Ser Gly Ala Val
 125 130 135
 Phe Pro Val Ala Gly Ala Asp Val Gln Thr Leu Arg Glu Arg Leu
 140 145 150
 Ile Asp Ala Leu Glu Ser His His Asp Thr Trp Pro Pro Ala Cys
 155 160 165
 Pro Pro Leu Glu Pro Ala Lys Leu Glu Glu Ile Asp Gly Phe Phe
 170 175 180
 Ala Arg Asn Asn Glu Glu Tyr Leu Ala Leu Ile Phe Glu Lys Gly
 185 190 195
 Gly Ser Tyr Leu Gly Arg Glu Val Ala Leu Asp Leu Ser Gln His

200					205					210				
Lys	Gly	Val	Ala	Val	Arg	Arg	Val	Leu	Asn	Thr	Glu	Ala	Asn	Val
				215					220					225
Val	Arg	Lys	Phe	Gly	Val	Thr	Asp	Phe	Pro	Ser	Cys	Tyr	Leu	Leu
				230					235					240
Phe	Arg	Asn	Gly	Ser	Val	Ser	Arg	Val	Pro	Val	Leu	Met	Glu	Ser
				245					250					255
Arg	Ser	Phe	Tyr	Thr	Ala	Tyr	Leu	Gln	Arg	Leu	Ser	Gly	Leu	Thr
				260					265					270
Arg	Glu	Ala	Ala	Gln	Thr	Thr	Val	Ala	Pro	Thr	Thr	Ala	Asn	Lys
				275					280					285
Ile	Ala	Pro	Thr	Val	Trp	Lys	Leu	Ala	Asp	Arg	Ser	Lys	Ile	Tyr
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Ser	Leu	Trp	Val	Leu	Phe	His	Phe	Leu	Thr	Val	Gln	Ala	Ala	Arg
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Gln	Asn	Val	Asp	His	Ser	Gln	Glu	Ala	Ala	Lys	Ala	Lys	Glu	Val
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Leu	Pro	Ala	Ile	Arg	Gly	Tyr	Val	His	Tyr	Phe	Phe	Gly	Cys	Arg
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Asp	Cys	Ala	Ser	His	Phe	Glu	Gln	Met	Ala	Ala	Ala	Ser	Met	His
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Arg	Val	Gly	Ser	Pro	Asn	Ala	Ala	Val	Leu	Trp	Leu	Trp	Ser	Ser
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<212> DNA

<213> Homo sapien

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 Ala Arg Gly Asp Ala Arg Gly Ala Gln Leu Trp Pro Pro Gly Ser
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Lys	Cys	Leu	Arg	Glu	Met	Tyr	Thr	Thr	His	Glu	Asp	Val	Glu	Val	245	250	255
Gly	Arg	Cys	Val	Arg	Arg	Phe	Ala	Gly	Val	Gln	Cys	Val	Trp	Ser	260	265	270
Tyr	Glu	Met	Gln	Gln	Leu	Phe	Tyr	Glu	Asn	Tyr	Glu	Gln	Asn	Lys	275	280	285
Lys	Gly	Tyr	Ile	Arg	Asp	Leu	His	Asn	Ser	Lys	Ile	His	Gln	Ala	290	295	300
Ile	Thr	Leu	His	Pro	Asn	Lys	Asn	Pro	Pro	Tyr	Gln	Tyr	Arg	Leu	305	310	315
His	Ser	Tyr	Met	Leu	Ser	Arg	Lys	Ile	Ser	Glu	Leu	Arg	His	Arg	320	325	330
Thr	Ile	Gln	Leu	His	Arg	Glu	Ile	Val	Leu	Met	Ser	Lys	Tyr	Ser	335	340	345
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Trp	Glu	Phe	Leu	Thr	Gly	Lys	Tyr	Leu	Tyr	Ser	Ala	Val	Asp	Gly	380	385	390
Gln	Pro	Pro	Arg	Arg	Gly	Met	Asp	Ser	Ala	Gln	Arg	Glu	Ala	Leu	395	400	405
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Pro	Val	Arg	Arg	His	Ala	Tyr	Leu	Gln	Gln	Thr	Phe	Ser	Lys	Ile	470	475	480
Gln	Phe	Val	Glu	His	Glu	Glu	Leu	Asp	Ala	Gln	Glu	Leu	Ala	Lys	485	490	495
Arg	Ile	Asn	Gln	Glu	Ser	Gly	Ser	Leu	Ser	Phe	Leu	Ser	Asn	Ser	500	505	510
Leu	Lys	Lys	Leu	Val	Pro	Phe	Gln	Leu	Pro	Gly	Ser	Lys	Ser	Glu			

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Ser	Gly	Arg	Phe	Asp	Met	Phe	Val	Arg	Phe	Met	Gly	Asn	Phe	Glu
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Lys	Thr	Cys	Leu	Ile	Pro	Asn	Gln	Asn	Val	Lys	Leu	Val	Val	Leu
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Cys	Asp	Pro	Asn	Leu	Asp	Pro	Lys	Gln	Tyr	Lys	Met	Cys	Leu	Gly
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Ser	Lys	Ala	Ser	Thr	Tyr	Gly	Ser	Thr	Gln	Gln	Leu	Ala	Glu	Met
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Pro Arg Gln Asp Trp Thr Gly Ser Thr Pro Ala Tyr Gly Tyr Trp
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Phe Lys Ala Val Thr Glu Thr Thr Lys Gly Ala Pro Val Ala Thr
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Asn His Gln Ser Arg Glu Val Glu Met Ser Thr Arg Gly Arg Phe

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Arg	Asp	Ala	Gln	Met	Gln	Asp	Glu	Ser	Gln	Tyr	Phe	Phe	Arg	Val					
				110					115					120					
Glu	Arg	Gly	Ser	Tyr	Val	Arg	Tyr	Asn	Phe	Met	Asn	Asp	Gly	Phe					
				125					130					135					
Phe	Leu	Lys	Val	Thr	Ala	Leu	Thr	Gln	Lys	Pro	Asp	Val	Tyr	Ile					
				140					145					150					
Pro	Glu	Thr	Leu	Glu	Pro	Gly	Gln	Pro	Val	Thr	Val	Ile	Cys	Val					
				155					160					165					
Phe	Asn	Trp	Ala	Phe	Glu	Glu	Cys	Pro	Pro	Pro	Ser	Phe	Ser	Trp					
				170					175					180					
Thr	Gly	Ala	Ala	Leu	Ser	Ser	Gln	Gly	Thr	Lys	Pro	Thr	Thr	Ser					
				185					190					195					
His	Phe	Ser	Val	Leu	Ser	Phe	Thr	Pro	Arg	Pro	Gln	Asp	His	Asn					
				200					205					210					
Thr	Asp	Leu	Thr	Cys	His	Val	Asp	Phe	Ser	Arg	Lys	Gly	Val	Ser					
				215					220					225					
Val	Gln	Arg	Thr	Val	Arg	Leu	Arg	Val	Ala	Tyr	Ala	Pro	Arg	Asp					
				230					235					240					
Leu	Val	Ile	Ser	Ile	Ser	Arg	Asp	Asn	Thr	Pro	Ala	Leu	Glu	Pro					
				245					250					255					
Gln	Pro	Gln	Gly	Asn	Val	Pro	Tyr	Leu	Glu	Ala	Gln	Lys	Gly	Gln					
				260					265					270					
Phe	Leu	Arg	Leu	Leu	Cys	Ala	Ala	Asp	Ser	Gln	Pro	Pro	Ala	Thr					
				275					280					285					
Leu	Ser	Trp	Val	Leu	Gln	Asn	Arg	Val	Leu	Ser	Ser	Ser	His	Pro					
				290					295					300					
Trp	Gly	Pro	Arg	Pro	Leu	Gly	Leu	Glu	Leu	Pro	Gly	Val	Lys	Ala					
				305					310					315					
Gly	Asp	Ser	Gly	Arg	Tyr	Thr	Cys	Arg	Ala	Glu	Asn	Arg	Leu	Gly					
				320					325					330					
Ser	Gln	Gln	Arg	Ala	Leu	Asp	Leu	Ser	Val	Gln	Tyr	Pro	Pro	Glu					
				335					340					345					
Asn	Leu	Arg	Val	Met	Val	Ser	Gln	Ala	Asn	Arg	Thr	Val	Leu	Glu					
				350					355					360					
Asn	Leu	Gly	Asn	Gly	Thr	Ser	Leu	Pro	Val	Leu	Glu	Gly	Gln	Ser					
				365					370					375					

Leu	Cys	Leu	Val	Cys	Val	Thr	His	Ser	Ser	Pro	Pro	Ala	Arg	Leu	380	385	390
Ser	Trp	Thr	Gln	Arg	Gly	Gln	Val	Leu	Ser	Pro	Ser	Gln	Pro	Ser	395	400	405
Asp	Pro	Gly	Val	Leu	Glu	Leu	Pro	Arg	Val	Gln	Val	Glu	His	Glu	410	415	420
Gly	Glu	Phe	Thr	Cys	His	Ala	Arg	His	Pro	Leu	Gly	Ser	Gln	His	425	430	435
Val	Ser	Leu	Ser	Leu	Ser	Val	His	Tyr	Ser	Pro	Lys	Leu	Leu	Gly	440	445	450
Pro	Ser	Cys	Ser	Trp	Glu	Ala	Glu	Gly	Leu	His	Cys	Ser	Cys	Ser	455	460	465
Ser	Gln	Ala	Ser	Pro	Ala	Pro	Ser	Leu	Arg	Trp	Trp	Leu	Gly	Glu	470	475	480
Glu	Leu	Leu	Glu	Gly	Asn	Ser	Ser	Gln	Asp	Ser	Phe	Glu	Val	Thr	485	490	495
Pro	Ser	Ser	Ala	Gly	Pro	Trp	Ala	Asn	Ser	Ser	Leu	Ser	Leu	His	500	505	510
Gly	Gly	Leu	Ser	Ser	Gly	Leu	Arg	Leu	Arg	Cys	Glu	Ala	Trp	Asn	515	520	525
Val	His	Gly	Ala	Gln	Ser	Gly	Ser	Ile	Leu	Gln	Leu	Pro	Asp	Lys	530	535	540
Lys	Gly	Leu	Ile	Ser	Thr	Ala	Phe	Ser	Asn	Gly	Ala	Phe	Leu	Gly	545	550	555
Ile	Gly	Ile	Thr	Ala	Leu	Leu	Phe	Leu	Cys	Leu	Ala	Leu	Ile	Ile	560	565	570
Met	Lys	Ile	Leu	Pro	Lys	Arg	Arg	Thr	Gln	Thr	Glu	Thr	Pro	Arg	575	580	585
Pro	Arg	Phe	Ser	Arg	His	Ser	Thr	Ile	Leu	Asp	Tyr	Ile	Asn	Val	590	595	600
Val	Pro	Thr	Ala	Gly	Pro	Leu	Ala	Gln	Lys	Arg	Asn	Gln	Lys	Ala	605	610	615
Thr	Pro	Asn	Ser	Pro	Arg	Thr	Pro	Leu	Pro	Pro	Gly	Ala	Pro	Ser	620	625	630
Pro	Glu	Ser	Lys	Lys	Asn	Gln	Lys	Lys	Gln	Tyr	Gln	Leu	Pro	Ser	635	640	645
Phe	Pro	Glu	Pro	Lys	Ser	Ser	Thr	Gln	Ala	Pro	Glu	Ser	Gln	Glu	650	655	660
Ser	Gln	Glu	Glu	Leu	His	Tyr	Ala	Thr	Leu	Asn	Phe	Pro	Gly	Val			

	665		670		675									
Arg	Pro	Arg	Pro	Glu	Ala	Arg	Met	Pro	Lys	Gly	Thr	Gln	Ala	Asp
				680					685					690
Tyr	Ala	Glu	Val	Lys	Phe	Gln								
				695										

<210> 11
 <211> 1724
 <212> DNA
 <213> Homo sapien

<400> 11
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 cgcagggccc acctgtgtcc ccagcgccg ctccaccag caggcctgag 100
 cccctctctg ctgccagaca cccctgctg ccactctcc tgctgctcgg 150
 gttctgaggc acagcttgct acaccgaggc ggattctctt tctctttctc 200
 ttctggccca cagccgcagc aatggcgctg agttcctctg ctggagttca 250
 tcctgctagc tgggttcccg agctgccggt ctgagcctga ggcatggagc 300
 ctctggaga ctgggggcct cctccctgga gatccacccc cagaaccgac 350
 gtcttgaggc tgggtgctgta tctcaccttc ctgggagccc cctgctacgc 400
 ccagctctg ccgtcctgca aggaggacga gtaccagtg ggctccgagt 450
 gctgccccaa gtgcagtcca ggttatcgtg tgaaggaggc ctgcggggag 500
 ctgacgggca cagtgtgtga accctgccct ccaggcacct acattgcca 550
 cctcaatggc ctaagcaagt gtctgcagtg ccaaagtgtg gaccagcca 600
 tgggcctgcg cgcgagccg aactgctcca ggacagagaa cgccgtgtgt 650
 ggctgcagcc caggccactt ctgcatcgtc caggacgggg accactgcgc 700
 cgctgcccgc gcttacgcca cctccagccc gggccagagg gtgcagaagg 750
 gaggcaccga gagtcaggac accctgtgtc agaactgcc cccggggacc 800
 ttctctcca atgggaccct ggaggaatgt cagcaccaga ccaagtgcag 850
 ctggctggtg acgaaggccg gagctgggac cagcagctcc cactgggtat 900
 ggtggtttct ctcagggagc ctcgtcatcg tcattgtttg ctccacagtt 950
 ggcctaata tatgtgtgaa aagaagaaag ccaaggggtg atgtagtcaa 1000
 ggtgatcgtc tccgtccagc ggaaaagaca ggaggcagaa ggtgaggcca 1050
 cagtcattga ggccctgcag gccctccgg acgtcaccac ggtggccgtg 1100

gaggagacaa taccctcatt cacggggagg agcccaaacc actgaccac 1150
agactctgca ccccgacgcc agagatacct ggagcgacgg ctgctgaaag 1200
aggctgtcca cctggcgaaa ccaccggagc ccggaggctt gggggctcgc 1250
ccctgggctg gcttccgtct cctccagtgg agggagaggt gggggcccctg 1300
ctggggtaga gctggggacg ccacgtgcca ttcccatggg ccagtgaggg 1350
cctggggcct ctgttctgct gtggcctgag ctccccagag tcctgaggag 1400
gagcgccagt tgcccctcgc tcacagacca cacaccagc cctcctgggc 1450
cagcccagag ggcccttcag accccagctg tctgcgcgtc tgactcttgt 1500
ggcctcagca ggacaggccc cgggcactgc ctcacagcca aggttgagct 1550
gggttggtg cagtgtggtg tttagtggat accacatcgg aagtgatattt 1600
ctaaattgga tttgaattcc ggtcctgtct tctatttgtc atgaaacagt 1650
gtatttgggg agatgctgtg ggaggatgta aatatcttgt ttctcctcaa 1700
aaaaaaaaa aaaaaaaaaa aaaa 1724

<210> 12
<211> 283
<212> PRT
<213> Homo sapien

<400> 12
Met Glu Pro Pro Gly Asp Trp Gly Pro Pro Pro Trp Arg Ser Thr
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Pro Arg Thr Asp Val Leu Arg Leu Val Leu Tyr Leu Thr Phe Leu
20 25 30
Gly Ala Pro Cys Tyr Ala Pro Ala Leu Pro Ser Cys Lys Glu Asp
35 40 45
Glu Tyr Pro Val Gly Ser Glu Cys Cys Pro Lys Cys Ser Pro Gly
50 55 60
Tyr Arg Val Lys Glu Ala Cys Gly Glu Leu Thr Gly Thr Val Cys
65 70 75
Glu Pro Cys Pro Pro Gly Thr Tyr Ile Ala His Leu Asn Gly Leu
80 85 90
Ser Lys Cys Leu Gln Cys Gln Met Cys Asp Pro Ala Met Gly Leu
95 100 105
Arg Ala Ser Arg Asn Cys Ser Arg Thr Glu Asn Ala Val Cys Gly
110 115 120
Cys Ser Pro Gly His Phe Cys Ile Val Gln Asp Gly Asp His Cys
125 130 135

Ala	Ala	Cys	Arg	Ala	Tyr	Ala	Thr	Ser	Ser	Pro	Gly	Gln	Arg	Val
				140					145					150
Gln	Lys	Gly	Gly	Thr	Glu	Ser	Gln	Asp	Thr	Leu	Cys	Gln	Asn	Cys
				155					160					165
Pro	Pro	Gly	Thr	Phe	Ser	Pro	Asn	Gly	Thr	Leu	Glu	Glu	Cys	Gln
				170					175					180
His	Gln	Thr	Lys	Cys	Ser	Trp	Leu	Val	Thr	Lys	Ala	Gly	Ala	Gly
				185					190					195
Thr	Ser	Ser	Ser	His	Trp	Val	Trp	Trp	Phe	Leu	Ser	Gly	Ser	Leu
				200					205					210
Val	Ile	Val	Ile	Val	Cys	Ser	Thr	Val	Gly	Leu	Ile	Ile	Cys	Val
				215					220					225
Lys	Arg	Arg	Lys	Pro	Arg	Gly	Asp	Val	Val	Lys	Val	Ile	Val	Ser
				230					235					240
Val	Gln	Arg	Lys	Arg	Gln	Glu	Ala	Glu	Gly	Glu	Ala	Thr	Val	Ile
				245					250					255
Glu	Ala	Leu	Gln	Ala	Pro	Pro	Asp	Val	Thr	Thr	Val	Ala	Val	Glu
				260					265					270
Glu	Thr	Ile	Pro	Ser	Phe	Thr	Gly	Arg	Ser	Pro	Asn	His		
				275					280					

<210> 13
 <211> 1002
 <212> DNA
 <213> Homo sapien

<400> 13
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 ttctgctgct tctcctagtg gcggcgctctg cgatgggtccg gagcgaggcc 100
 tcggccaatc tgggcggcgt gccagcaaga gattaaagat gcagtacgcc 150
 acggggccgc tgctcaagtt ccagatttgt gtttcctgag gttataggcg 200
 ggtgtttgag gagtacatgc gggttattag ccagcggtag ccagacatcc 250
 gcattgaagg agagaattac ctccctcaac caatatatag acacatagca 300
 tctttcctgt cagtcttcaa actagtatta ataggcttaa taattgttgg 350
 caaggatcct ttgcttttct ttggcatgca agctcctagc atctggcagt 400
 ggggccaaga aaataagggt tatgcatgta tgatgggtttt cttcttgagc 450
 aacatgattg agaaccagtg tatgtcaaca ggtgcatttg agataacttt 500
 aaatgatgta cctgtgtggt ctaagctgga atctgggtcac ctccatcca 550

tgcaacaact tgttcaaatt cttgacaatg aaatgaagct caatgtgcat 600
 atggattcaa tcccacacca tcgatcatag caccacctat cagcactgaa 650
 aactcttttg cattaagggga tcattgcaag agcagcgtga ctgacattat 700
 gaaggcctgt actgaagaca gcaagctgtt agtacagacc agatgctttc 750
 ttggcaggct cgttgtacct cttggaaaac ctcaatgcaa gatagtgttt 800
 cagtgtctggc atatttttga attctgcaca ttcattggagt gcaataatac 850
 tgtatagctt tccccacac cccacaaaat caccagtta atgtgtgtgt 900
 gtgtgttttt tttaaggtaa acattactac ttgtaacttt ttttcttttag 950
 tcatatttgg aaaaagtaga aaattggagt tacatttggga ttttttttcc 1000
 aa 1002

<210> 14
 <211> 163
 <212> PRT
 <213> Homo sapien

<220>
 <221> Unsure
 <222> 17
 <223> Unknown amino acid

<400> 14
 Met Gln Tyr Ala Thr Gly Pro Leu Leu Lys Phe Gln Ile Cys Val
 1 5 10 15
 Ser Xaa Gly Tyr Arg Arg Val Phe Glu Glu Tyr Met Arg Val Ile
 20 25 30
 Ser Gln Arg Tyr Pro Asp Ile Arg Ile Glu Gly Glu Asn Tyr Leu
 35 40 45
 Pro Gln Pro Ile Tyr Arg His Ile Ala Ser Phe Leu Ser Val Phe
 50 55 60
 Lys Leu Val Leu Ile Gly Leu Ile Ile Val Gly Lys Asp Pro Phe
 65 70 75
 Ala Phe Phe Gly Met Gln Ala Pro Ser Ile Trp Gln Trp Gly Gln
 80 85 90
 Glu Asn Lys Val Tyr Ala Cys Met Met Val Phe Phe Leu Ser Asn
 95 100 105
 Met Ile Glu Asn Gln Cys Met Ser Thr Gly Ala Phe Glu Ile Thr
 110 115 120
 Leu Asn Asp Val Pro Val Trp Ser Lys Leu Glu Ser Gly His Leu
 125 130 135

Pro Ser Met Gln Gln Leu Val Gln Ile Leu Asp Asn Glu Met Lys
140 145 150

Leu Asn Val His Met Asp Ser Ile Pro His His Arg Ser
155 160

<210> 15
<211> 3002
<212> DNA
<213> Homo sapien

<400> 15
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tgactaacac catgcctatc tgtggagaag ctggcaacat gtcacacctg 100
gaaattgttt ttcaacatta atactattat ttggcagtaa tccagattgc 150
ttttgccacc aacctgaaga catatagagg cagaaggaca ggaataattc 200
tatttgtttc ctgttttgaa acttccatct gtaaggctat caaaaggaga 250
tgtgagagag ggtattgagt ctggcctgac aatgcagttc ttaaaccaaa 300
ggtccattat gcttctctc tctgagaatc ctgacttacc tcaacaacgg 350
agacatggca cagtagccag cttggagact tctcagccaa tgctctgaga 400
tcaagtcgaa gacccaatat acagggtttt gagctcatct tcatcattca 450
tatgaggaaa taagtggtaa aatccttgga aatacaatga gactcatcag 500
aaacatttac atattttgta gtattgttat gacagcagag ggtgatgctc 550
cagagctgcc agaagaaagg gaactgatga ccaactgctc caacatgtct 600
ctaagaaagg ttcccgaga cttgacccca gccacaacga cactggattt 650
atcctataac ctcctttttc aactccagag ttcagatttt cattctgtct 700
ccaaactgag agttttgatt ctatgccata acagaattca acagctggat 750
ctcaaacct ttgaattcaa caaggagtta agatatttag atttgtctaa 800
taacagactg aagagtgtaa cttggtattt actggcaggt ctcaggtatt 850
tagatctttc ttttaatgac tttgacacca tgcctatctg tgaggaagct 900
ggcaacatgt cacacctgga aatcctaggt ttgagtgggg caaaaataca 950
aaaatcagat ttccagaaaa ttgctcatct gcatctaaat actgtcttct 1000
taggattcag aactcttctt cattatgaag aaggtagcct gcccatctta 1050
aacacaacaa aactgcacat tgttttacca atggacacaa atttctgggt 1100
tcttttgcgt gatggaatca agacttcaaa aatattagaa atgacaaata 1150

tagatggcaa aagccaattt gtaagttatg aaatgcaacg aaatcttagt 1200
ttagaaaatg ctaagacatc ggttctattg cttaataaag ttgatttact 1250
ctgggacgac cttttcctta tcttacaatt tgtttgcat acatcagtgg 1300
aacactttca gatccgaaat gtgacttttg gtggtaaggc ttatcttgac 1350
cacaattcat ttgactactc aaatactgta atgagaacta taaaattgga 1400
gcatgtacat ttcagagtgt ttacattca acaggataaa atctatttgc 1450
ttttgaccaa aatggacata gaaaacctga caatatcaaa tgcacaaatg 1500
ccacacatgc ttttcccgaa ttatcctacg aaattccaat atttaaattt 1550
tgccaataat atcttaacag acgagttgtt taaaagaact atccaactgc 1600
ctcacttgaa aactctcatt ttgaatggca ataaactgga gacactttct 1650
ttagtaagtt gctttgctaa caacacaccc ttggaacact tggatctgag 1700
tcaaaatcta ttacaacata aaaatgatga aaattgctca tggccagaaa 1750
ctgtggtcaa tatgaatctg tcatacaata aattgtctga ttctgtcttc 1800
aggtgcttgc ccaaagtat tcaaatactt gacctaaata ataaccaaatt 1850
ccaaactgta cctaaagaga ctattcatct gatggcctta cgagaactaa 1900
atattgcatt taattttcta actgatctcc ctggatgcag tcatttcagt 1950
agactttcag ttctgaacat tgaaatgaac ttcatctca gcccatctct 2000
ggattttggt cagagctgcc aggaagttaa aactctaaat gcggaagaa 2050
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tattcagagg tcatgatggg ttgatgggtc gattcataca cctgtgaata 2150
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tatcttgcaa cacagctctg ttgattgtca ccattgtggg tattatgcta 2250
gttctggggg ttggctgtggc cttctgctgt ctccactttg atctgccctg 2300
gtatctcagg atgctaggtc aatgcacaca aacatggcac agggttagga 2350
aaacaacca agaacaactc aagagaaatg tccgattcca cgcatttatt 2400
tcatacagtg aacatgattc tctgtgggtg aagaatgaat tgatcccaa 2450
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ttgaccctgg caaaagcatt agtgaaaata ttgtaagctt cattgagaaa 2550
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gtgccattat gaattttact ttgcccacca caatctcttc catgaaaatt 2650
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 cccaccaggt atcataaaact gaaagctctc ctggaaaaaa aagcatactt 2750
 ggaatggccc aaggataggc gtaaatgtgg gcttttctgg gcaaaccctt 2800
 gagctgctat taatgttaat gtattagcca ccagagaaat gtatgaactg 2850
 cagacattca cagagttaaa tgaagagtct cgagggttcta caatctctct 2900
 gatgagaaca gattgtctat aaaatccac agtccttggg aagttgggga 2950
 ccacatacac tgttgggatg tacattgata caacctttat gatggcaatt 3000
 tg 3002

<210> 16
 <211> 811
 <212> PRT
 <213> Homo sapien

<400> 16
 Met Arg Leu Ile Arg Asn Ile Tyr Ile Phe Cys Ser Ile Val Met
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 Thr Ala Glu Gly Asp Ala Pro Glu Leu Pro Glu Glu Arg Glu Leu
 20 25 30
 Met Thr Asn Cys Ser Asn Met Ser Leu Arg Lys Val Pro Ala Asp
 35 40 45
 Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu
 50 55 60
 Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg
 65 70 75
 Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys
 80 85 90
 Thr Phe Glu Phe Asn Lys Glu Leu Arg Tyr Leu Asp Leu Ser Asn
 95 100 105
 Asn Arg Leu Lys Ser Val Thr Trp Tyr Leu Leu Ala Gly Leu Arg
 110 115 120
 Tyr Leu Asp Leu Ser Phe Asn Asp Phe Asp Thr Met Pro Ile Cys
 125 130 135
 Glu Glu Ala Gly Asn Met Ser His Leu Glu Ile Leu Gly Leu Ser
 140 145 150
 Gly Ala Lys Ile Gln Lys Ser Asp Phe Gln Lys Ile Ala His Leu
 155 160 165
 His Leu Asn Thr Val Phe Leu Gly Phe Arg Thr Leu Pro His Tyr

	170		175		180
Glu Glu Gly Ser	Leu Pro Ile Leu Asn Thr Thr Lys Leu His Ile				
	185		190		195
Val Leu Pro Met	Asp Thr Asn Phe Trp Val Leu Leu Arg Asp Gly				
	200		205		210
Ile Lys Thr Ser	Lys Ile Leu Glu Met Thr Asn Ile Asp Gly Lys				
	215		220		225
Ser Gln Phe Val	Ser Tyr Glu Met Gln Arg Asn Leu Ser Leu Glu				
	230		235		240
Asn Ala Lys Thr	Ser Val Leu Leu Leu Asn Lys Val Asp Leu Leu				
	245		250		255
Trp Asp Asp Leu	Phe Leu Ile Leu Gln Phe Val Trp His Thr Ser				
	260		265		270
Val Glu His Phe	Gln Ile Arg Asn Val Thr Phe Gly Gly Lys Ala				
	275		280		285
Tyr Leu Asp His	Asn Ser Phe Asp Tyr Ser Asn Thr Val Met Arg				
	290		295		300
Thr Ile Lys Leu	Glu His Val His Phe Arg Val Phe Tyr Ile Gln				
	305		310		315
Gln Asp Lys Ile	Tyr Leu Leu Leu Thr Lys Met Asp Ile Glu Asn				
	320		325		330
Leu Thr Ile Ser	Asn Ala Gln Met Pro His Met Leu Phe Pro Asn				
	335		340		345
Tyr Pro Thr Lys	Phe Gln Tyr Leu Asn Phe Ala Asn Asn Ile Leu				
	350		355		360
Thr Asp Glu Leu	Phe Lys Arg Thr Ile Gln Leu Pro His Leu Lys				
	365		370		375
Thr Leu Ile Leu	Asn Gly Asn Lys Leu Glu Thr Leu Ser Leu Val				
	380		385		390
Ser Cys Phe Ala	Asn Asn Thr Pro Leu Glu His Leu Asp Leu Ser				
	395		400		405
Gln Asn Leu Leu	Gln His Lys Asn Asp Glu Asn Cys Ser Trp Pro				
	410		415		420
Glu Thr Val Val	Asn Met Asn Leu Ser Tyr Asn Lys Leu Ser Asp				
	425		430		435
Ser Val Phe Arg	Cys Leu Pro Lys Ser Ile Gln Ile Leu Asp Leu				
	440		445		450
Asn Asn Asn Gln	Ile Gln Thr Val Pro Lys Glu Thr Ile His Leu				
	455		460		465

Met	Ala	Leu	Arg	Glu	Leu	Asn	Ile	Ala	Phe	Asn	Phe	Leu	Thr	Asp		470	475	480
Leu	Pro	Gly	Cys	Ser	His	Phe	Ser	Arg	Leu	Ser	Val	Leu	Asn	Ile		485	490	495
Glu	Met	Asn	Phe	Ile	Leu	Ser	Pro	Ser	Leu	Asp	Phe	Val	Gln	Ser		500	505	510
Cys	Gln	Glu	Val	Lys	Thr	Leu	Asn	Ala	Gly	Arg	Asn	Pro	Phe	Arg		515	520	525
Cys	Thr	Cys	Glu	Leu	Lys	Asn	Phe	Ile	Gln	Leu	Glu	Thr	Tyr	Ser		530	535	540
Glu	Val	Met	Met	Val	Gly	Trp	Ser	Asp	Ser	Tyr	Thr	Cys	Glu	Tyr		545	550	555
Pro	Leu	Asn	Leu	Arg	Gly	Ile	Arg	Leu	Lys	Asp	Val	His	Leu	His		560	565	570
Glu	Leu	Ser	Cys	Asn	Thr	Ala	Leu	Leu	Ile	Val	Thr	Ile	Val	Val		575	580	585
Ile	Met	Leu	Val	Leu	Gly	Leu	Ala	Val	Ala	Phe	Cys	Cys	Leu	His		590	595	600
Phe	Asp	Leu	Pro	Trp	Tyr	Leu	Arg	Met	Leu	Gly	Gln	Cys	Thr	Gln		605	610	615
Thr	Trp	His	Arg	Val	Arg	Lys	Thr	Thr	Gln	Glu	Gln	Leu	Lys	Arg		620	625	630
Asn	Val	Arg	Phe	His	Ala	Phe	Ile	Ser	Tyr	Ser	Glu	His	Asp	Ser		635	640	645
Leu	Trp	Val	Lys	Asn	Glu	Leu	Ile	Pro	Asn	Leu	Glu	Lys	Glu	Asp		650	655	660
Gly	Ser	Ile	Leu	Ile	Cys	Leu	Tyr	Glu	Ser	Tyr	Phe	Asp	Pro	Gly		665	670	675
Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr		680	685	690
Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp		695	700	705
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu		710	715	720
Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe		725	730	735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu		740	745	750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly				

	755		760		765
Leu Phe Trp Ala Asn Leu Arg Ala Ala Ile Asn Val Asn Val Leu					
	770		775		780
Ala Thr Arg Glu Met Tyr Glu Leu Gln Thr Phe Thr Glu Leu Asn					
	785		790		795
Glu Glu Ser Arg Gly Ser Thr Ile Ser Leu Met Arg Thr Asp Cys					
	800		805		810
Leu					

<210> 17
 <211> 1911
 <212> DNA
 <213> Homo sapien

<400> 17
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 ttcattggaa ggtatcctcc aagaaggcgg gggctctgat gaggaaattc 200
 ggcagcgacc acacgggagt ggggcgctcc atcgtgtacg gggtaaagca 250
 aaaagatggc caagaactaa gtaacgatct ggatgccag gatccaccag 300
 aagatatgaa gcaggaccgg gacattcagg cagtggcgac ctccctctg 350
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 cggaagcgct acgagccagt gccagctgac aagatgtggg gcctggctga 550
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cacaggcatg gtaccaccag cctccccgct ggtacagggc acagttacct 1450
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cttgattctt tttttgcctc atcagagaag gaatctggac tccccatccc 1850
cccaccagga taaaagtcct gacctttggt ctcttgacgg aataaaagct 1900
tgcttatacct t 1911

<210> 18
<211> 291
<212> PRT
<213> Homo sapien

<400> 18
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Arg Glu Lys Phe His Gly Lys Val Ser Ser Lys Lys Ala Gly Ala
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Leu Met Arg Lys Phe Gly Ser Asp His Thr Gly Val Gly Arg Ser
35 40 45
Ile Val Tyr Gly Val Lys Gln Lys Asp Gly Gln Glu Leu Ser Asn
50 55 60

Asp	Leu	Asp	Ala	Gln	Asp	Pro	Pro	Glu	Asp	Met	Lys	Gln	Asp	Arg	
				65					70					75	
Asp	Ile	Gln	Ala	Val	Ala	Thr	Ser	Leu	Leu	Pro	Leu	Thr	Glu	Ala	
				80					85					90	
Asn	Leu	Arg	Met	Phe	Gln	Arg	Ala	Gln	Asp	Asp	Leu	Ile	Pro	Ala	
				95					100					105	
Val	Asp	Arg	Gln	Phe	Ala	Cys	Ser	Ser	Cys	Asp	His	Val	Trp	Trp	
				110					115					120	
Arg	Arg	Val	Pro	Gln	Arg	Lys	Glu	Val	Ser	Arg	Cys	Arg	Lys	Cys	
				125					130					135	
Arg	Lys	Arg	Tyr	Glu	Pro	Val	Pro	Ala	Asp	Lys	Met	Trp	Gly	Leu	
				140					145					150	
Ala	Glu	Phe	His	Cys	Pro	Lys	Cys	Arg	His	Asn	Phe	Arg	Gly	Trp	
				155					160					165	
Ala	Gln	Met	Gly	Ser	Pro	Ser	Pro	Cys	Tyr	Gly	Cys	Gly	Phe	Pro	
				170					175					180	
Val	Tyr	Pro	Thr	Arg	Ile	Leu	Pro	Pro	Arg	Arg	Asp	Arg	Asp	Pro	
				185					190					195	
Asp	Arg	Arg	Ser	Thr	His	Thr	His	Ser	Cys	Ser	Ala	Ala	Asp	Cys	
				200					205					210	
Tyr	Asn	Arg	Arg	Glu	Pro	His	Val	Pro	Gly	Thr	Ser	Cys	Ala	His	
				215					220					225	
Pro	Lys	Ser	Arg	Lys	Gln	Asn	His	Leu	Pro	Lys	Val	Leu	His	Pro	
				230					235					240	
Ser	Asn	Pro	His	Ile	Ser	Ser	Gly	Pro	Thr	Val	Ala	Thr	Cys	Leu	
				245					250					255	
Ser	Gln	Gly	Gly	Leu	Leu	Glu	Asp	Leu	Asp	Asn	Leu	Ile	Leu	Glu	
				260					265					270	
Asp	Leu	Lys	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Val	Glu	Asp	Glu	
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Glu	Gly	Gly	Pro	Arg	Glu										
				290											

<210> 19

<211> 1603

<212> DNA

<213> Homo sapien

<400> 19

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gggctcctac ttggttcgga ggtcccgcgc gcctcaggtc actctcctgg 150
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 cacaacacca agaggttccg ctttgccctg cccaccgccc accacactct 250
 ggggctgcct gtgggcaaac atatctacct ctccaccga attgatggca 300
 acctggtcat caggccatac actcctgtca ccagtgatga ggatcaaggc 350
 tatgtggatc ttgtcatcaa ggtctacctg aaggggtgtgc accccaaatt 400
 tcttgaggga ggaagatgt ctgagtacct ggatagcctg aaggttgggc 450
 atgtgggtga gtttcggggg ccaagcgggt tgctcactta cactggaaaa 500
 gggcatttta acattcagcc caacaagaaa tctccaccag aaccccgagt 550
 ggcgaagaaa ctgggaatga ttgccggcgc gacaggaatc accccaatgc 600
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aaa 1603

<210> 20

<211> 305

<212> PRT

<213> Homo sapien

<400> 20

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Gly	Leu	Val	Thr	Leu	Leu	Gly	Leu	Ala	Val	Gly	Ser	Tyr	Leu	Val
			20						25					30

Arg	Arg	Ser	Arg	Arg	Pro	Gln	Val	Thr	Leu	Leu	Asp	Pro	Asn	Glu
				35					40					45

Lys	Tyr	Leu	Leu	Arg	Leu	Leu	Asp	Lys	Thr	Thr	Val	Ser	His	Asn
				50					55					60

Thr	Lys	Arg	Phe	Arg	Phe	Ala	Leu	Pro	Thr	Ala	His	His	Thr	Leu
				65					70					75

Gly	Leu	Pro	Val	Gly	Lys	His	Ile	Tyr	Leu	Ser	Thr	Arg	Ile	Asp
				80					85					90

Gly	Asn	Leu	Val	Ile	Arg	Pro	Tyr	Thr	Pro	Val	Thr	Ser	Asp	Glu
				95					100					105

Asp	Gln	Gly	Tyr	Val	Asp	Leu	Val	Ile	Lys	Val	Tyr	Leu	Lys	Gly
				110					115					120

Val	His	Pro	Lys	Phe	Pro	Glu	Gly	Gly	Lys	Met	Ser	Gln	Tyr	Leu
				125					130					135

Asp	Ser	Leu	Lys	Val	Gly	His	Val	Val	Glu	Phe	Arg	Gly	Pro	Ser
				140					145					150

Gly	Leu	Leu	Thr	Tyr	Thr	Gly	Lys	Gly	His	Phe	Asn	Ile	Gln	Pro
				155					160					165

Asn	Lys	Lys	Ser	Pro	Pro	Glu	Pro	Arg	Val	Ala	Lys	Lys	Leu	Gly
				170					175					180

Met	Ile	Ala	Gly	Gly	Thr	Gly	Ile	Thr	Pro	Met	Leu	Gln	Leu	Ile
				185					190					195

Arg	Ala	Ile	Leu	Lys	Val	Pro	Glu	Asp	Pro	Thr	Gln	Cys	Phe	Leu
				200					205					210

Leu	Phe	Ala	Asn	Gln	Thr	Glu	Lys	Asp	Ile	Ile	Leu	Arg	Glu	Asp
				215					220					225

Leu	Glu	Glu	Leu	Gln	Ala	Arg	Tyr	Pro	Asn	Arg	Phe	Lys	Leu	Trp
				230					235					240

Phe	Thr	Leu	Asp	His	Pro	Pro	Lys	Asp	Trp	Ala	Tyr	Ser	Lys	Gly
				245					250					255
Phe	Val	Thr	Ala	Asp	Met	Ile	Arg	Glu	His	Leu	Pro	Ala	Pro	Gly
				260					265					270
Asp	Asp	Val	Leu	Val	Leu	Leu	Cys	Gly	Pro	Pro	Pro	Met	Val	Gln
				275					280					285
Leu	Ala	Cys	His	Pro	Asn	Leu	Asp	Lys	Leu	Gly	Tyr	Ser	Gln	Lys
				290					295					300
Met	Arg	Phe	Thr	Tyr										
				305										

<210> 21
 <211> 2728
 <212> DNA
 <213> Homo sapien

<400> 21
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 tgaacgggat tctgggggag tcagtaactc ttcccctgga gtttcctgca 150
 ggagagaagg tcaacttcat cacttggctt ttcaatgaaa catctcttgc 200
 cttcatagta ccccatgaaa ccaaaagtcc agaaatccac gtgactaatc 250
 cgaaacaggg aaagcgactg aacttcaccc agtcctactc cctgcaactc 300
 agcaacctga agatggaaga cacaggctct tacagagccc agatatccac 350
 aaagacctct gcaaagctgt ccagttacac tctgaggata ttaagacaac 400
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<210> 22
 <211> 331
 <212> PRT
 <213> Homo sapien

<400> 22
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 Asn Gly Ile Leu Gly Glu Ser Val Thr Leu Pro Leu Glu Phe Pro
 35 40 45
 Ala Gly Glu Lys Val Asn Phe Ile Thr Trp Leu Phe Asn Glu Thr
 50 55 60
 Ser Leu Ala Phe Ile Val Pro His Glu Thr Lys Ser Pro Glu Ile
 65 70 75
 His Val Thr Asn Pro Lys Gln Gly Lys Arg Leu Asn Phe Thr Gln
 80 85 90
 Ser Tyr Ser Leu Gln Leu Ser Asn Leu Lys Met Glu Asp Thr Gly
 95 100 105
 Ser Tyr Arg Ala Gln Ile Ser Thr Lys Thr Ser Ala Lys Leu Ser
 110 115 120
 Ser Tyr Thr Leu Arg Ile Leu Arg Gln Leu Arg Asn Ile Gln Val
 125 130 135
 Thr Asn His Ser Gln Leu Phe Gln Asn Met Thr Cys Glu Leu His
 140 145 150
 Leu Thr Cys Ser Val Glu Asp Ala Asp Asp Asn Val Ser Phe Arg
 155 160 165
 Trp Glu Ala Leu Gly Asn Thr Leu Ser Ser Gln Pro Asn Leu Thr
 170 175 180
 Val Ser Trp Asp Pro Arg Ile Ser Ser Glu Gln Asp Tyr Thr Cys
 185 190 195

Ile	Ala	Glu	Asn	Ala	Val	Ser	Asn	Leu	Ser	Phe	Ser	Val	Ser	Ala
				200					205					210
Gln	Lys	Leu	Cys	Glu	Asp	Val	Lys	Ile	Gln	Tyr	Thr	Asp	Thr	Lys
				215					220					225
Met	Ile	Leu	Phe	Met	Val	Ser	Gly	Ile	Cys	Ile	Val	Phe	Gly	Phe
				230					235					240
Ile	Ile	Leu	Leu	Leu	Leu	Val	Leu	Arg	Lys	Arg	Arg	Asp	Ser	Leu
				245					250					255
Ser	Leu	Ser	Thr	Gln	Arg	Thr	Gln	Gly	Pro	Glu	Ser	Ala	Arg	Asn
				260					265					270
Leu	Glu	Tyr	Val	Ser	Val	Ser	Pro	Thr	Asn	Asn	Thr	Val	Tyr	Ala
				275					280					285
Ser	Val	Thr	His	Ser	Asn	Arg	Glu	Thr	Glu	Ile	Trp	Thr	Pro	Arg
				290					295					300
Glu	Asn	Asp	Thr	Ile	Thr	Ile	Tyr	Ser	Thr	Ile	Asn	His	Ser	Lys
				305					310					315
Glu	Ser	Lys	Pro	Thr	Phe	Ser	Arg	Ala	Thr	Ala	Leu	Asp	Asn	Val
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Val

<210> 23
 <211> 4796
 <212> DNA
 <213> Homo sapien

<400> 23
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 cttcctatcc ttaccgacc tcagatgctc ccttctgctc ctggtaactt 200
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 aaaactttga atgaattata cctaaatctg ggacagggag gtgacagtgg 2100
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<210> 24
<211> 451
<212> PRT
<213> Homo sapien

<400> 24

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				20					25					30	
Ser	Gln	Pro	Pro	Ala	Pro	Val	Pro	Val	Thr	Asp	Pro	Ser	Val	Thr	
				35					40					45	
Met	His	Pro	Ala	Val	Phe	Leu	Ser	Leu	Pro	Asp	Leu	Arg	Cys	Ser	
				50					55					60	
Leu	Leu	Leu	Leu	Val	Thr	Trp	Val	Phe	Thr	Pro	Val	Thr	Thr	Glu	
				65					70					75	
Ile	Thr	Ser	Leu	Asp	Thr	Glu	Asn	Ile	Asp	Glu	Ile	Leu	Asn	Asn	
				80					85					90	
Ala	Asp	Val	Ala	Leu	Val	Asn	Phe	Tyr	Ala	Asp	Trp	Cys	Arg	Phe	
				95					100					105	
Ser	Gln	Met	Leu	His	Pro	Ile	Phe	Glu	Glu	Ala	Ser	Asp	Val	Ile	
				110					115					120	
Lys	Glu	Glu	Phe	Pro	Asn	Glu	Asn	Gln	Val	Val	Phe	Ala	Arg	Val	
				125					130					135	
Asp	Cys	Asp	Gln	His	Ser	Asp	Ile	Ala	Gln	Arg	Tyr	Arg	Ile	Ser	
				140					145					150	
Lys	Tyr	Pro	Thr	Leu	Lys	Leu	Phe	Arg	Asn	Gly	Met	Met	Met	Lys	
				155					160					165	
Arg	Glu	Tyr	Arg	Gly	Gln	Arg	Ser	Val	Lys	Ala	Leu	Ala	Asp	Tyr	
				170					175					180	
Ile	Arg	Gln	Gln	Lys	Ser	Asp	Pro	Ile	Gln	Glu	Ile	Arg	Asp	Leu	
				185					190					195	
Ala	Glu	Ile	Thr	Thr	Leu	Asp	Arg	Ser	Lys	Arg	Asn	Ile	Ile	Gly	
				200					205					210	
Tyr	Phe	Glu	Gln	Lys	Asp	Ser	Asp	Asn	Tyr	Arg	Val	Phe	Glu	Arg	
				215					220					225	
Val	Ala	Asn	Ile	Leu	His	Asp	Asp	Cys	Ala	Phe	Leu	Ser	Ala	Phe	
				230					235					240	
Gly	Asp	Val	Ser	Lys	Pro	Glu	Arg	Tyr	Ser	Gly	Asp	Asn	Ile	Ile	
				245					250					255	
Tyr	Lys	Pro	Pro	Gly	His	Ser	Ala	Pro	Asp	Met	Val	Tyr	Leu	Gly	
				260					265					270	
Ala	Met	Thr	Asn	Phe	Asp	Val	Thr	Tyr	Asn	Trp	Ile	Gln	Asp	Lys	
				275					280					285	

Cys	Val	Pro	Leu	Val	Arg	Glu	Ile	Thr	Phe	Glu	Asn	Gly	Glu	Glu	290	295	300
Leu	Thr	Glu	Glu	Gly	Leu	Pro	Phe	Leu	Ile	Leu	Phe	His	Met	Lys	305	310	315
Glu	Asp	Thr	Glu	Ser	Leu	Glu	Ile	Phe	Gln	Asn	Glu	Val	Ala	Arg	320	325	330
Gln	Leu	Ile	Ser	Glu	Lys	Gly	Thr	Ile	Asn	Phe	Leu	His	Ala	Asp	335	340	345
Cys	Asp	Lys	Phe	Arg	His	Pro	Leu	Leu	His	Ile	Gln	Lys	Thr	Pro	350	355	360
Ala	Asp	Cys	Pro	Val	Ile	Ala	Ile	Asp	Ser	Phe	Arg	His	Met	Tyr	365	370	375
Val	Phe	Gly	Asp	Phe	Lys	Asp	Val	Leu	Ile	Pro	Gly	Lys	Leu	Lys	380	385	390
Gln	Phe	Val	Phe	Asp	Leu	His	Ser	Gly	Lys	Leu	His	Arg	Glu	Phe	395	400	405
His	His	Gly	Pro	Asp	Pro	Thr	Asp	Thr	Ala	Pro	Gly	Glu	Gln	Ala	410	415	420
Gln	Asp	Val	Ala	Ser	Ser	Pro	Pro	Glu	Ser	Ser	Phe	Gln	Lys	Leu	425	430	435
Ala	Pro	Ser	Glu	Tyr	Arg	Tyr	Thr	Leu	Leu	Arg	Asp	Arg	Asp	Glu	440	445	450

Leu

<210> 25
 <211> 810
 <212> DNA
 <213> Homo sapien

<400> 25
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 tgccgccaag accggtgcgg agctcgtgac ctgcgggtcg gtgctgaagc 150
 tgctcaatac gcaccaccgc gtgcggctgc actcgcacga catcaaatac 200
 ggatccggca gcggccagca atcggtgacc ggcgtagagg cgtcggacga 250
 cgcaaatagc tactggcgga tccgcggcgg ctcgaggagg gggtgcccgt 300
 gcgggtcccc ggtgcgctgc gggcaggcgg tgagggtcac gcatgtgctt 350
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ccaggaggtg agtgcctttg gggaagacgg cgagggcgac gacctggacc 450
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cgcttacagc atgtgggcac ctctgtgttc ctgtcagtca cgggtgagca 550
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ccaacacgca caatacgtgg aaggccatgg aaggcatctt catcaagcct 650
agtgtggagc cctctgcagg tcacgatgaa ctctgagtgt gtggatggat 700
gggtggatgg aggggtggcag gtggggcgctc tgcagggcca ctcttggcag 750
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<210> 26
<211> 221
<212> PRT
<213> Homo sapien

<400> 26
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Gly Leu Leu Leu Ala Leu Leu Val Pro Gly Gly Gly Ala Ala Lys
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Thr Gly Ala Glu Leu Val Thr Cys Gly Ser Val Leu Lys Leu Leu
35 40 45
Asn Thr His His Arg Val Arg Leu His Ser His Asp Ile Lys Tyr
50 55 60
Gly Ser Gly Ser Gly Gln Gln Ser Val Thr Gly Val Glu Ala Ser
65 70 75
Asp Asp Ala Asn Ser Tyr Trp Arg Ile Arg Gly Gly Ser Glu Gly
80 85 90
Gly Cys Pro Cys Gly Ser Pro Val Arg Cys Gly Gln Ala Val Arg
95 100 105
Leu Thr His Val Leu Thr Gly Lys Asn Leu His Thr His His Phe
110 115 120
Pro Ser Pro Leu Ser Asn Asn Gln Glu Val Ser Ala Phe Gly Glu
125 130 135
Asp Gly Glu Gly Asp Asp Leu Asp Leu Trp Thr Val Arg Cys Ser
140 145 150
Gly Gln His Trp Glu Arg Glu Ala Ala Val Arg Leu Gln His Val
155 160 165
Gly Thr Ser Val Phe Leu Ser Val Thr Gly Glu Gln Tyr Gly Ser

	170		175		180
Pro Ile Arg Gly Gln His Glu Val His Gly Met Pro Ser Ala Asn					
	185		190		195
Thr His Asn Thr Trp Lys Ala Met Glu Gly Ile Phe Ile Lys Pro					
	200		205		210
Ser Val Glu Pro Ser Ala Gly His Asp Glu Leu					
	215		220		

<210> 27
 <211> 1256
 <212> DNA
 <213> Homo sapien

<400> 27
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 cccgcgccgg aggccgcaa gaagccgacg ccctgccacc ggtgccgggg 150
 gctggtggac aagttaacc aggggatggt ggacaccgca aagaagaact 200
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 gctgcatttc ttggttggtc ttaaacagac ttgtatatatt tgatacagtt 1200
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 aaaaaa 1256

<210> 28
 <211> 321
 <212> PRT
 <213> Homo sapien

<400> 28
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 Leu Leu Leu Pro Pro Ala Pro Glu Ala Ala Lys Lys Pro Thr Pro
 20 25 30
 Cys His Arg Cys Arg Gly Leu Val Asp Lys Phe Asn Gln Gly Met
 35 40 45
 Val Asp Thr Ala Lys Lys Asn Phe Gly Gly Gly Asn Thr Ala Trp
 50 55 60
 Glu Glu Lys Thr Leu Ser Lys Tyr Glu Ser Ser Glu Ile Arg Leu
 65 70 75
 Leu Glu Ile Leu Glu Gly Leu Cys Glu Ser Ser Asp Phe Glu Cys
 80 85 90
 Asn Gln Met Leu Glu Ala Gln Glu Glu His Leu Glu Ala Trp Trp
 95 100 105
 Leu Gln Leu Lys Ser Glu Tyr Pro Asp Leu Phe Glu Trp Phe Cys
 110 115 120
 Val Lys Thr Leu Lys Val Cys Cys Ser Pro Gly Thr Tyr Gly Pro
 125 130 135
 Asp Cys Leu Ala Cys Gln Gly Gly Ser Gln Arg Pro Cys Ser Gly
 140 145 150
 Asn Gly His Cys Ser Gly Asp Gly Ser Arg Gln Gly Asp Gly Ser
 155 160 165
 Cys Arg Cys His Met Gly Tyr Gln Gly Pro Leu Cys Thr Asp Cys
 170 175 180
 Met Asp Gly Tyr Phe Ser Ser Leu Arg Asn Glu Thr His Ser Ile
 185 190 195
 Cys Thr Ala Cys Asp Glu Ser Cys Lys Thr Cys Ser Gly Leu Thr
 200 205 210

Asn	Arg	Asp	Cys	Gly	Glu	Cys	Glu	Val	Gly	Trp	Val	Leu	Asp	Glu
				215					220					225
Gly	Ala	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Ala	Glu	Pro	Pro	Pro
				230					235					240
Cys	Ser	Ala	Ala	Gln	Phe	Cys	Lys	Asn	Ala	Asn	Gly	Ser	Tyr	Thr
				245					250					255
Cys	Glu	Asp	Val	Asp	Glu	Cys	Ser	Leu	Ala	Glu	Lys	Thr	Cys	Val
				260					265					270
Arg	Lys	Asn	Glu	Asn	Cys	Tyr	Asn	Thr	Pro	Gly	Ser	Tyr	Val	Cys
				275					280					285
Val	Cys	Pro	Asp	Gly	Phe	Glu	Glu	Thr	Glu	Asp	Ala	Cys	Val	Pro
				290					295					300
Pro	Ala	Glu	Ala	Glu	Ala	Thr	Glu	Gly	Glu	Ser	Pro	Thr	Gln	Leu
				305					310					315
Pro	Ser	Arg	Glu	Asp	Leu									
				320										